

REMARKS

This communication responds to the Office Action mailed on August 10, 2007.

Claims 1-5, 8-9, 12, 17-21, 24-25 and 28 are amended, no claims are canceled, and claim 30-34 are added; as a result, claims 1-34 are now pending in this application.

§101 Rejection of the Claims

Claims 17-29 were rejected under 35 U.S.C. § 101 as being directed to non-statutory subject matter.

Applicant has amended the specification to conform the invention claimed in claims 17-29 to be within statutory subject matter.

In view of the above, claims 17-29 are believed to be in form for allowance. Therefore, Applicant respectfully requests that rejections to these claims under 35 U.S.C. § 101, be reconsidered, and that the rejections be removed and that these claims be allowed.

§112 Rejection of the Claims

Claims 1-6 and 17-21 were rejected under 35 U.S.C. § 112, first paragraph, as lacking adequate description or enablement. Additionally, claims 1-6 and 17-21 were rejected under 35 U.S.C. § 112, second paragraph, for indefiniteness.

Applicant believes that the Examiner meant claims 1-5 rather than claims 1-6 in the Office Action. With regard to claims 1-5 and claims 17-21, Applicant has amended claims 1 and 17 to clarify these claims and place them in condition for allowance. Therefore, Applicant respectfully requests that rejections to these claims under 35 U.S.C. § 112, first and second paragraphs, be removed and that these claims be allowed.

§103 Rejection of the Claims

Claims 1-5 and 17-21 were rejected under 35 U.S.C. § 103(a) as being unpatentable over NAS ("NAS Origin2000 Configuration for Batch Job Execution", March 2000, pages 1-7), and in view of Krueger et al. (US 6,247,041). Since a *prima facie* case of obviousness has not been established by the Office, Applicant respectfully traverses.

1) The Applicable Law

As discussed in *KSR International Co. v. Teleflex Inc. et al.* (U.S. 2007), the determination of obviousness under 35 U.S.C. § 103 is a legal conclusion based on factual evidence. See *Princeton Biochemicals, Inc. v. Beckman Coulter, Inc.*, 7, 1336-37 (Fed. Cir. 2005). The legal conclusion, that a claim is obvious within § 103(a), depends on at least four underlying factual issues set forth in *Graham v. John Deere Co. of Kansas City*, 383 U.S. 1, 17 (1966): (1) the scope and content of the prior art; (2) differences between the prior art and the claims at issue; (3) the level of ordinary skill in the pertinent art; and (4) evaluation of any relevant secondary considerations.

The Examiner has the burden under 35 U.S.C. § 103 to establish a *prima facie* case of obviousness. *In re Fine*, 837 F.2d 1071, 1074 (Fed. Cir. 1988). To establish a *prima facie* case of obviousness, three basic criteria should be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. *M.P.E.P.* § 2142 (citing *In re Vaeck*, 947 F.2d, 488, 20 USPQ2d 1438 (Fed. Cir. 1991)).

Moreover, the Office Action must provide specific, objective evidence of record for a finding of a suggestion or motivation to combine reference teachings and must explain the reasoning by which the evidence is deemed to support such a finding. See *KSR Int'l Co.*, p. 14, citing *In re Kahn*, 441 F. 3d 977, 988 (Fed. Cir. 2006); *In re Sang Su Lee*, 277 F.3d 1338, 61 USPQ2d 1430 (Fed. Cir. 2002).

Therefore, the test for obviousness under §103 must take into consideration the invention as a whole; that is, one must consider the particular problem solved by the combination of elements that define the invention. *Interconnect Planning Corp. v. Feil*, 774 F.2d 1132, 1143, 227 USPQ 543, 551 (Fed. Cir.1985). The Examiner must, as one of the inquiries pertinent to any obviousness inquiry under 35 U.S.C. §103, recognize and consider not only the similarities but also the critical differences between the claimed invention and the prior art. *In re Bond*, 910 F.2d 831, 834, 15 USPQ2d 1566, 1568 (Fed. Cir. 1990), *reh'g denied*, 1990 U.S. App. LEXIS 19971 (Fed. Cir.1990). The fact that a reference teaches away from a claimed invention is

highly probative that the reference would not have rendered the claimed invention obvious to one of ordinary skill in the art. *Stranco Inc. v. Atlantes Chemical Systems, Inc.*, 15 USPQ2d 1704, 1713 (Tex. 1990). When the prior art teaches away from combining certain known elements, discovery of a successful means of combining them is more likely to be nonobvious. *Id.* p. 4 citing *United States v. Adams*, 383 U.S. 39, 51-51 (1966). Additionally, critical differences in the prior art must be recognized (when attempting to combine references). *In re Bond*, 910 F.2d 831, 834, 15 USPQ2d 1566, 1568 (Fed. Cir. 1990), *reh'g denied*, 1990 U.S. App. LEXIS 19971 (Fed. Cir.1990).

Furthermore, the Court in *KSR* reaffirmed that “[a] factfinder should be aware, of course, of the distortion caused by hindsight bias and must be cautious of argument reliant upon ex post reasoning.” *KSR Int’l Co. v. Teleflex Inc.*, 127 S. Ct. 1727, 82 USPQ2d at 1397. *See also Graham v. John Deere Co.*, 383 U.S. at 36, 148 USPQ at 474.

2) *Application of § 103 to rejected claims - Combining the References Does Not Supply All Claimed Elements:*

As noted above, the prior art reference (or, as in this case, references when combined) must teach or suggest all the claim limitations. In the present application, the Examiner has not pointed out in either of the references a teaching or suggestion for “allocating a resource to the resource consumer from one of the set of resource providers whose flavor matches the flavor assigned to the resource consumer.” Neither NAS nor Krueger alone or in combination disclose the above element. Thus, all elements of independent claims 1 and 17 are not taught or suggested by the combinations of references cited in the Office Action.

The Office Action cites broad passages of NAS as support for the proposition that NAS teaches these features. However, the Office Action fails to specifically point out specific text in NAS that teaches the above element of claims 1 and 17. To illustrate further illustrate the differences between NAS and the present application, Applicant has provided FIG. 1 (representing configuration in NAS) and FIG. 2 (a representation of claims 1 and 17) below.

According to the Office Action, NAS teaches “a cpuset is a collection of CPUs to which a process (and all of its children) can be bound. The cpuset can be made exclusive, so that only

processes that are attached to it may access a CPU within it.” (See NAS, page 2, lines 56-57)
The arrangement in NAS is represented by FIG. 1.

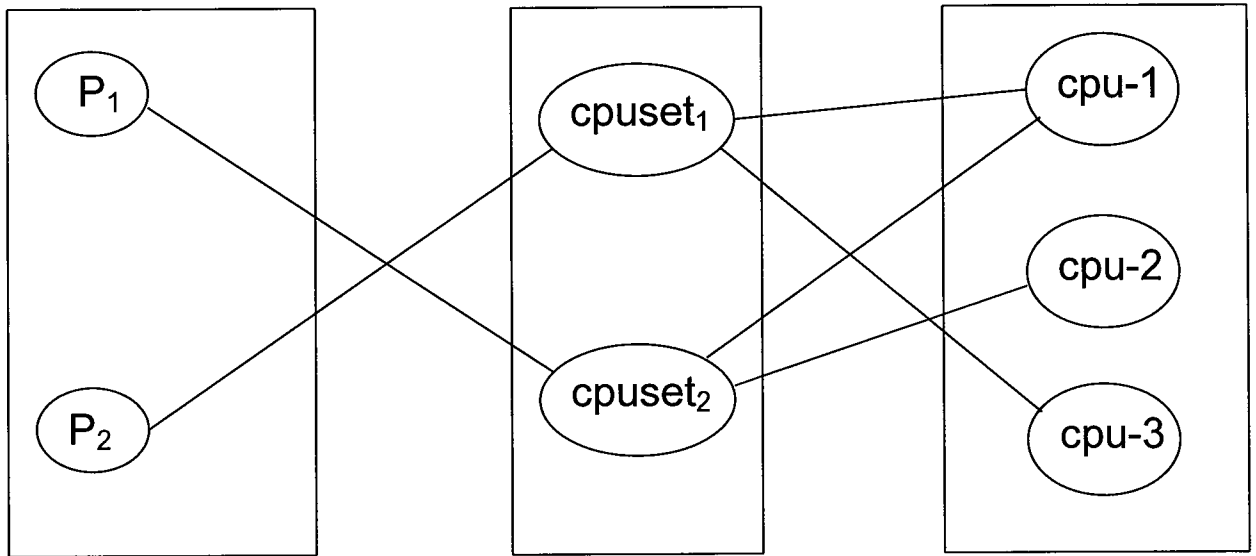


FIG. 1

In contrast, Claim 1 and 17 provide for a layer of abstraction (represented by flavors) between the resource providers and resource consumers. As shown in FIG. 2, P₁ and P₂ represent different processes or programs and T represents a thread. P₁, P₂ and T can be considered as resource consumers. Nodes 1, 2, and 3 can be considered as resource providers. The concept of flavors provides an abstraction layer between the resource providers and the resource consumers. In this system, a programmer can allocate resources in a flexible way by matching resource consumers to resource providers based on a common attribute termed flavor. As shown in FIG. 2, OS-F₁ and OS-F₂ represent different flavors corresponding to different operating systems and Appl-F₁ and Appl-F₂ represent different flavors corresponding to different applications. OS-F₁ is associated with Node 1 and Node 3 and OS-F₂ is associated with Node 2. Similarly, Appl-F₁ is associated with Node 1 and Node 2 and Appl-F₂ is associated with Node 3.

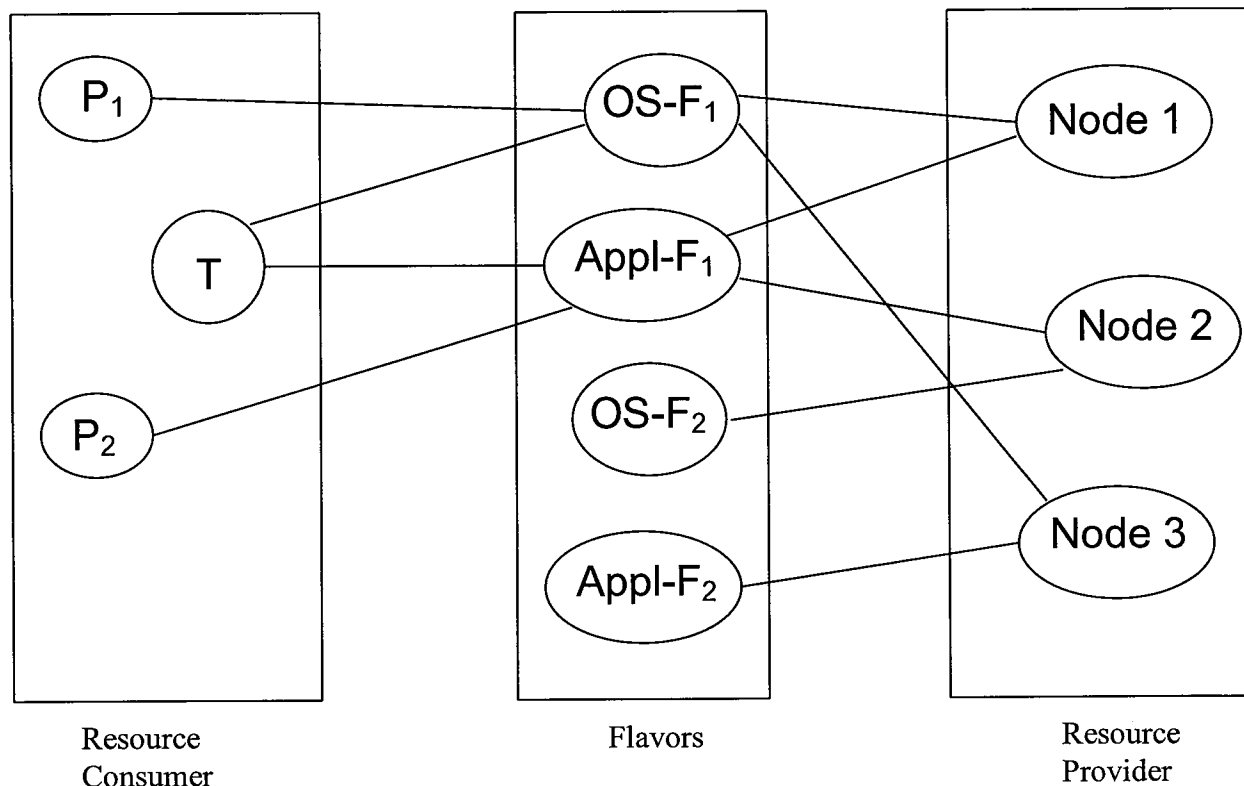


FIG. 2

This two-way association of resource providers and resource consumers is described and claimed by Applicant. NAS' mapping of CPU's to CPU sets does not provide the same type of flexibility as that described and claimed by Applicant. Because critical claim limitations are not taught or in any way suggested by NAS, and Krueger does not even mention these features, then the combination of NAS and Krueger cannot teach or suggest claims 1 and 17.

Moreover, neither NAS nor Krueger, alone or in combination, teaches or suggests "marking a field to indicate that the resource consumer is limited to receiving resources from the certain one of the set of resource providers." As mentioned above, the Office Action cites broad passages of NAS (page 2, OS support for resource management section) as support for the proposition that NAS teaches these features. The Office Action fails to specifically point out specific text in NAS that teaches the above element of claims 1 and 17. Applicant has not been able to find any teaching or suggestion of this element in the cited references.

The Examiner admits that NAS does not specifically teach “creating a resource consumer”, and “assigning the resource consumer one of a set of flavors.” Examiner goes on to state that Krueger teaches these elements of claims 1 and 17.

Krueger, however, suggests that “... a user process may advise an operating system to store a process (i.e., another process or the user process itself on a node having a specified system resource.) When the user process makes a system call to the operating system to either create or move a process, a specified system resource is passed with the call to the operating system. (emphasis added)” (See, Kruger, col. 2, lines 51-57) Krueger does not teach or suggest “**assigning the resource consumer** one of a set of flavors (emphasis added).”

Based on at least the foregoing reasons, withdrawal of the rejection of claims 1-5 and claims 17-29 under 35 U.S.C. § 103(a) is respectfully requested.

Claims 2-5 depend directly from claim 1. Claims 18-21 depend directly from claim 17. These dependent claims inherit the elements of their respective base claims, and are therefore allowable for the same reasons as discussed above with respect to claims 1 and 17. Applicant respectfully requests reconsideration and the withdrawal of the rejection of claims 1-5 and claims 17-21.

§102 Rejection of the Claims

Claims 6-16 and 22-29 were rejected under 3 U.S.C. § 102(b) as being anticipated by NAS. Applicant does not admit that NAS is prior art and reserves the right to swear behind this reference at a later date. In addition, because the Office has not properly established a *prima facie* case of anticipation, the Applicant respectfully traverses this rejection of the claims.

Anticipation under 35 USC § 102 requires the disclosure in a single prior art reference of each element of the claim under consideration. *See Verdegaal Bros. V. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ 2d 1051, 1053 (Fed. Cir. 1987). It is not enough, however, that the prior art reference discloses all the claimed elements in isolation. Rather, “[a]nticipation requires the presence in a single prior reference disclosure of each and every element of the claimed invention, *arranged as in the claim.*” *Lindemann Maschinenfabrik GmbH v. American Hoist & Derrick Co.*, 730 F.2d 1452, 221 USPQ 481, 485 (Fed. Cir. 1984) (citing *Connell v. Sears, Roebuck & Co.*, 722 F.2d 1542, 220 USPQ 193 (Fed. Cir. 1983)) (emphasis

added). “The *identical invention* must be shown in as complete detail as is contained in the ... claim.” *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989); MPEP § 2131 (emphasis added).

For similar reasons as described above for claims 1 and 17, independent claims 6, 14, 22 and 27 are not anticipated by NAS. Claims 7-13 depend directly from claim 6. Claims 15-16 are depend directly from claim 14. Claims 23-26 depend directly from claim 22. Claims 28-29 depend directly from claim 27. These dependent claims inherit the elements of their respective base claims, and are therefore allowable for the same reasons as discussed above with respect to claims 1 and 17. Applicant respectfully requests reconsideration and the withdrawal of the rejection of claims 6-13, 14-16, 22-26 and 27-29.

Reservation of Rights

In the interest of clarity and brevity, Applicant may not have equally addressed every assertion made in the Office Action, however, this does not constitute any admission or acquiescence. Applicant reserves all rights not exercised in connection with this response, such as the right to challenge or rebut any tacit or explicit characterization of any reference or of any of the present claims, the right to challenge or rebut any asserted factual or legal basis of any of the rejections, the right to swear behind any cited reference such as provided under 37 C.F.R. § 1.131 or otherwise, or the right to assert co-ownership of any cited reference. Applicant does not admit that any of the cited references or any other references of record are relevant to the present claims, or that they constitute prior art. To the extent that any rejection or assertion is based upon the Examiner’s personal knowledge, rather than any objective evidence of record as manifested by a cited prior art reference, Applicant timely objects to such reliance on Official Notice, and reserves all rights to request that the Examiner provide a reference or affidavit in support of such assertion, as required by MPEP § 2144.03. Applicant reserves all rights to pursue any cancelled claims in a subsequent patent application claiming the benefit of priority of the present patent application, and to request rejoinder of any withdrawn claim, as required by MPEP § 821.04.

CONCLUSION

Applicant respectfully submits that the claims are in condition for allowance. Reconsideration of all claims and notification of allowance is earnestly requested. The Examiner is invited to telephone Applicant's attorney at (612) 373-6909 to facilitate prosecution of this application.

If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 19-0743.

Respectfully submitted,

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Date November 16, 2007

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CERTIFICATE UNDER 37 CFR 1.8: The undersigned hereby certifies that this correspondence is being filed using the USPTO's electronic filing system EFS-Web, and is addressed to: Mail Stop Amendment, Commissioner of Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on this 16 day of November 2007.

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